

Historic, archived document

Do not assume content reflects current
scientific knowledge, policies, or practices.

1.967
A2C78 VOL. 9 NO. 4
Cop. 2

JANUARY 23, 1959

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY

SURVEY & DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Survey & Detection Operations

Plant Pest Survey

Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

BOLL WEEVIL hibernation counts, Mississippi, Fall, 1958. (p. 31).

FIR ENGRAVER and WESTERN PINE BEETLE increasing in areas of California. (p. 32).

SUMMARY OF INSECT CONDITIONS - 1958 - TEXAS (p. 33); LOUISIANA (p. 35).

STATE CLEARING OFFICES for Economic Insect Survey Reports. (p. 39).

INSECTS not known to occur in the United States. (p. 43).

GRASSHOPPER adult survey, Fall, 1958. (map). (following p. 44).

The name Plant Pest Survey Section has been changed to Survey and Detection Operations. The address remains the same.

Reports in this issue are for the period ending January 16, unless otherwise indicated.

WEATHER BUREAU 30-DAY OUTLOOK

MID-JANUARY TO MID-FEBRUARY 1959

The Weather Bureau's 30-day outlook for the period mid-January to mid-February calls for temperatures to average below seasonal normals from the Continental Divide eastward to the Atlantic Seaboard, with greatest departures over the southern half of the country. Above normal temperatures are indicated west of the Divide. Precipitation is expected to exceed normal along the Gulf Coast and the Atlantic Seaboard, with considerable snow from Virginia northward. Subnormal amounts are indicated for the Missouri and upper Mississippi Valley areas and also the western intermountain States. In unspecified areas about normal precipitation is in prospect.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 a half year.

WEATHER OF THE WEEK ENDING JANUARY 19

For the second consecutive week unusually mild temperatures persisted in the Far West, while in the East unseasonably mild temperatures the first half of the period again were followed by subzero minima in north central areas and a weekend cold wave which pushed the freeze line to the Gulf coast and deep into the Florida Peninsula. Average temperatures for the week ranged from 3° to 15° above normal from the western Great Plains to the Pacific coast and 3° to 12° below normal from the Mississippi Valley to the Atlantic coast. With 4 days of subzero minima in north central areas and lows of -30° at International Falls and Bemidji, Minnesota, on the 17th (Saturday), the thickness of ice increased and in Minnesota ranged from 10 inches in the south to 40 inches in the north. An abnormal thickness of ice continued to impede water traffic in the Chesapeake Bay. Freeze or frost occurred in northern and central Florida on about 4 days and in the southern interior of the State on 2 to 3 days, but temperatures remained above the freezing level on the lower east coast.

Moderate to heavy precipitation was mostly limited to areas east of the Ohio and lower Mississippi Valleys, and the Pacific Northwest, and most of it fell during the first half of the week. Rains furnished beneficial moisture to many southeastern sections, but frequent rains in the Pacific Northwest caused heavy runoff and considerable soil erosion. Owing to mild temperatures in the Far West little snow fell in agricultural areas and the ground there is bare. Snowfall in the west central Great Plains early in the period ranged up to 10 inches in southeastern Colorado, but much of this snow melted before the end of the week. Snow fell in the East on the 16th and 17th, with amounts ranging from 2 to 3 inches in eastern Kentucky and Tennessee, the upper Ohio Valley and northeastern Interior. During the weekend, 51 inches of snow was reported to have fallen in 48 hours at Bennetts Bridge, New York, which is located about 10 to 15 miles east of Lake Ontario. On the 16th and 17th near Lake Michigan, 15 to 20 inches of snow fell in southern portions of Berrien and Cass Counties, Michigan, and South Bend, Indiana, measured 16 inches which, drifted by strong winds, virtually paralyzed the city's transportation. In the Mississippi Valley and Great Plains, the ground was mostly bare at the end of the week, except near the Canadian Border where depths ranged up to 41 inches at Houghton, Michigan. (Summary supplied by U. S. Weather Bureau.)

CEREAL AND FORAGE INSECTS

CHINCH BUG (*Blissus leucopterus*) - OKLAHOMA - Hibernation survey in 9 additional counties showed a severe infestation of 1,221 bugs per square foot in Jefferson County. (PPC, State Coop.).

GREENBUG (*Toxoptera graminum*) - OKLAHOMA - Averaged 0-9 per linear foot in scattered fields of fall-seeded wheat in northwestern and panhandle areas. (VanCleave, Latham). TEXAS - Averaged less than one per linear foot on wheat in Hunt County. (Davis). NEW MEXICO - Infestations remain light on wheat. Present in majority of fields in Quay and Curry Counties. (N. M. Coop. Rpt.).

APPLE GRAIN APHID (*Rhopalosiphum fitchii*) - OKLAHOMA - Averaged 25-400 per linear foot in fields of fall-seeded wheat in northwestern and panhandle areas. (VanCleave, Latham).

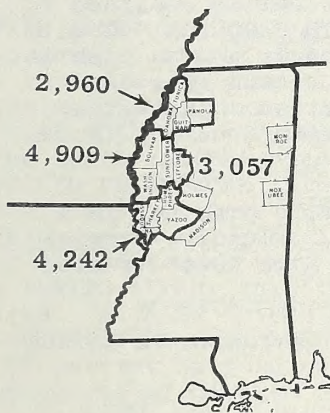
PEA APHID (*Macrosiphum pisi*) - NEW MEXICO - Populations in alfalfa fields in southern counties reduced by cold weather. (N. M. Coop. Rpt.).

WINTER GRAIN MITE (*Penthaleus major*) - TEXAS - Light to medium on wheat and oats in Hunt County. (Davis).

A SCALE (*Odonaspis ruthae*) - ARIZONA - Severe on Bermuda grass lawn in Phoenix, January 12. (Bibby).

COTTON INSECTS

Boll Weevil Hibernation Counts, Mississippi, Fall, 1958 - Collections of woods trash were started November 6 and completed December 9. Two square yards were included in each sample, with three samples being taken from each location. Samples were taken from either seven or eight locations in each area. Wherever possible, the samples were taken from locations that could be sampled again in the spring of 1959. The State was divided into four areas, with four counties per area, as follows: 1 - Lower delta (Sharkey, Issaquena, Yazoo, Humphries Counties); 2 - Central delta (Washington, Bolivar, Sunflower, Leflore Counties); 3 - North delta (Coahoma, Tunica, Quitman, Panola Counties); and 4 - Hill section (Holmes, Madison, Noxubee, Monroe Counties). Ninety samples were taken from 30 locations in each area, totaling 360 samples. The average number of weevils per acre in areas 1, 2, 3 and 4 were 4,242, 4,909, 2,960 and 3,057 respectively, as compared with 5,243, 6,269, 11,264 and 4,087 for the respective areas in the fall of 1957. The average number of weevils per acre for the State was 3,792, as compared with 6,716 for 1957 and 2,091 for 1956. (Ent. Res., PPC, State Coop.).



Averages by Area

PINK BOLLWORM (*Pectinophora gossypiella*) - OKLAHOMA - Inspection of dry cotton bolls collected and examined from the more heavily infested area of Kiowa County, near Snyder, since severe freezes during December, 1958, show a very high larval mortality. Fifty bolls from standing stalks had 29 infested with 70 dead larvae and 50 bolls from on the ground had 16 infested with 16 dead larvae. No larvae found alive in bolls inspected. (Burke).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SEQUOIA PITCH MOTH (Vespa mima sequoiae) - CALIFORNIA - Heavy infestation of Monterey pine in Santa Cruz, Santa Cruz County. (Cal. Coop. Rpt.).

ORANGE TORTRIX (Argyrotaenia citrana) - CALIFORNIA - This species and Holcocera iceryaella medium on Atlas cedar in Monterey, Monterey County. (Cal. Coop. Rpt.).

FIR ENGRAVER (Scolytus ventralis) - CALIFORNIA - Reported as increasing in grand fir in Humboldt County forest area. (Hofsted).

WESTERN PINE BEETLE (Dendroctonus brevicomis) - CALIFORNIA - Severely damaged ponderosa and Coulter pines in a 600-acre stand with 75-100 trees infested as compared to 7 trees infested in 1958, in the Figueroa Mountain area, San Bernardino County. (Pierce).

MEXICAN MEALYBUG (Phenacoccus gossypii) - CALIFORNIA - Heavy on poinsettias in Manteca, San Joaquin County. (Cal. Coop. Rpt.).

SCALE INSECTS - CALIFORNIA - Chrysomphalus rossi heavy on araucaria in San Mateo, Saissetia hemisphaerica medium on Atlas cedar in Monterey and Aspidiotus perniciosus light on euonymus in Exeter. (Cal. Coop. Rpt.).

SOUTHERN RED MITE (Oligonychus ilicis) - MARYLAND - Eggs abundant on Japanese holly at Frederick, Frederick County. (U. Md., Ent. Dept.).

INSECTS AFFECTING MAN AND ANIMALS

CATTLE GRUBS (Hypoderma spp.) - VIRGINIA - Appearing in backs of cattle examined in Washington, Albemarle and Sussex Counties. None found in cattle examined in King George and Charlotte Counties. (Turner, Morris). SOUTH CAROLINA - Counts as high as 16 per untreated animal were found in Richland County and as high as 20 in Colleton County. (Nettles, et al.). UTAH - Becoming common in backs of young cattle in some areas of Box Elder, Weber and Utah Counties. (Knowlton). NEW MEXICO - Averaged 20-30 per head in cattle checked in Union County. (N. M. Coop. Rpt.).

CATTLE LICE - VIRGINIA - Solenopotes capillatus light on cattle examined in a herd in King George County and one herd in Charlotte County. (Turner, Morris). UTAH - Common to troublesome in herds in Box Elder County. Some herds treated. (Knowlton).

TROPICAL RAT MITE (Ornithonyssus bacoti) - TEXAS - Annoying residents in Vernon, Wilbarger County. (Riley).

LIGHT TRAP COLLECTIONS

	<u>Pseudaletia</u> <u>unipuncta</u>	<u>Agrotis</u> <u>ypsilon</u>	<u>Feltia</u> <u>subterannea</u>
<u>LOUISIANA</u>			
Baton Rouge 1/9-15	4	6	12
Franklin 1/9-13	1	1	
<u>SOUTH CAROLINA</u>			
Charleston 1/5-11	4	1	2

SUMMARY OF INSECT CONDITIONS - 1958

TEXAS

Prepared by J. H. Hawkins

Highlights: SORGHUM WEBWORM populations were extremely heavy on grain sorghum. SOUTHWESTERN CORN BORER was heavy in corn on the high plains. COTTON FLEA-HOPPER continued heavy migrations into cotton fields. A FALSE CHINCH BUG caused extensive damage in grain sorghum fields. Infestations of WALNUT CATERPILLAR were heaviest in 25 years. CABBAGE LOOPER and CORN EARWORM caused heavy damage to vegetables on the high plains.

Cereal and Forage Insects: GREENBUG (*Toxoptera graminum*) did not develop into economic problems in the panhandle. A light infestation was observed on a clump of volunteer wheat near Amarillo in late August. Some economic damage was reported in the north central area. WINTER GRAIN MITE (*Penthaleus major*) infestations were light to heavy in the south and north central areas, especially in fields planted to small grains for several years. BROWN WHEAT MITE (*Petrobia latens*) occurred in isolated areas. CUTWORMS (*Agrotis ypsilon*, *Chorizagrotis auxiliaris* and *Peridroma margaritosa*) and ARMYWORM (*Pseudaletia unipuncta*) infestations in vetch and small grain were not as high as in 1957, but did cause economic damage. SPOTTED ALFALFA APHID (*Therioaphis maculata*) was light and spotted. CORN LEAF APHID (*Rhopalosiphum maidis*) caused considerable damage to small grains and grain sorghum in north and south central and southwest areas. CORN FLEA BEETLE (*Chaetocnema pulicaria*) caused heavy damage to young corn plants in north central area. SORGHUM WEBWORM (*Celama sorghiella*) infestations were extremely heavy on grain sorghum statewide. An average of 25 larvae per head was observed in the Brazos River Valley. A heavy infestation of SORGHUM MIDGE (*Contarinia sorghicola*) occurred on late-planted grain sorghum in south central, upper coastal and eastern areas. CORN EARWORM (*Heliothis zea*) severely damaged grain sorghum, peanuts and corn in all sections. FALL ARMYWORM (*Laphygma frugiperda*) caused considerable damage to corn, grain sorghum, pastures and small grains. BEET ARMYWORM (*Laphygma exigua*) averaged 2 to 5 per sweep on alfalfa in the Brazos River Valley. A WEEVIL (*Anacetrinus deplanatus*) occurred in damaging numbers on grain sorghum in central Texas. THREE-CORNERED ALFALFA HOPPER (*Spissistilus festinus*) was heavy on alfalfa in the south central area and damaged peanuts in the Winter Garden area. RED-NECKED PEANUTWORM (*Stegasta basqueella*) was heavy on peanuts in southwest, west cross timbers, west central and central areas. LESSER CORNSTALK BORER (*Elasmopalpus lignosellus*) was relatively light on peanuts in Winter Garden area, but caused some damage in west cross timbers and west central areas. A THRIPS (*Frankliniella* sp.) was heavy on spring peanuts in the Winter Garden area. A FALSE CHINCH BUG (*Nysius raphanus*) was heavy and damaged grain sorghum. SOUTHWESTERN CORN BORER (*Zeadiatraea grandiosella*) infestations ran as high as 100 percent in corn on the north and south plains. SUGARCANE BORER (*Diatraea saccharalis*) damaged corn and grain sorghum in upper coastal and south central areas with some damage to rice. GRASSHOPPERS (several species) infested over 5 million acres in the panhandle, ranging from light to severe. PEA APHID (*Macrosiphum pisi*) caused some damage to vetch and alfalfa. VETCH BRUCHID (*Bruchus brachialis*) caused considerable damage to vetch in north central area and spread to other vetch-growing areas. RICE WATER WEEVIL (*Lissorhoptrus oryzophilus*) infestations in rice were not as heavy as in 1957. A light infestation of RICE STINK BUG (*Oebalus pugnax*) appeared in the eastern section of the rice belt.

Fruit Insects: PLUM CURCULIO (Conotrachelus nenuphar) was generally light with CATFACING INSECTS causing medium to heavy damage. PEACH TREE BORER (Sanninoidea exitiosa) and LESSER PEACH TREE BORER (Synanthedon pictipes) were generally light in east Texas. PEACH TWIG BORER (Anarsia lineatella) was not as heavy in central area as in 1957. WALNUT CATERPILLAR (Datana integerrima) was the heaviest in 25 years in 8 south central pecan-growing counties. One generation in early spring caused partial to complete defoliation of large acreages and another in late summer destroyed much of the new and old foliage. PECAN NUT CASEBEARER (Acrobasis caryae) was relatively light statewide. BLACK PECAN APHID (Melanocallis caryaefoliae) caused some defoliation of pecan trees in the south central area and HICKORY SHUCKWORM (Laspeyresia caryana) caused considerable damage.

Truck Crop Insects: BEET LEAFHOPPER (Circulifer tenellus) and incidence of curly top were very light in the Winter Garden area, with some economic damage reported on the high plains. CABBAGE LOOPER (Trichoplusia ni) damaged cabbage and spinach in the Winter Garden area with heavy damage to lettuce on the high plains. Populations in the lower Rio Grande Valley were held in check by a fungus disease and a polyhedral virus. A SERPENTINE LEAFMINER (Liriomyza sp.) was very damaging to melons, tomatoes and peppers in this same area. CORN EARWORM (Heliothis zea) caused economic damage to corn and tomatoes statewide. POTATO PSYLLID (Paratrioza cockerelli) and POTATO APHID (Macrosiphum solanifolii) were very heavy and damaged tomatoes and potatoes in early spring in the Winter Garden area. Spotted local infestations of the following insects occurred in various parts of the State: A FALSE CABBAGE LOOPER, TOMATO PINWORM, CONCHUELA, BEAN LEAF BEETLE, THREE-CORNERED ALFALFA HOPPER, COLORADO POTATO BEETLE, WHITEFLIES, TOMATO HORNWORM, LEAFMINERS, SQUASH BUG, FLEA BEETLES, THRIPS, SWEETPOTATO WEEVIL, BLACK CUTWORM, MELON APHID, CUTWORMS and FALL ARMYWORM.

Cotton Insects: A THRIPS (Frankliniella sp.) varied over the State with rather heavy infestations on the high plains and in the Pecos River areas. COTTON FLEAHOPPER (Psallus seriatus) caused much concern because of heavy migrations. Fleahopper emergence in overwintering tests in central Texas was not as high as 1957. COTTON APHID (Aphis gossypii) was spotted and generally light to medium. BOLL WEEVIL (Anthonomus grandis) hibernation studies indicated that overwintering populations were similar to those of 1957. Infestations built up to damaging numbers in many areas of the State, especially in the lower Rio Grande Valley in mid-July. Control was difficult with chlorinated hydrocarbon insecticides in McLennan, Falls, Robertson, Brazos, Burleson and Grimes Counties in the Brazos River bottom. BOLLWORMS (Heliothis spp.) caused some concern in the lower Rio Grande Valley, south and north central areas. Spotted, heavy infestations developed in the south plains. CABBAGE LOOPER (Trichoplusia ni) was generally light with isolated heavy infestations in some areas. SPIDER MITES were light with only spotted damage occurring. COTTON LEAFWORM (Alabama argillacea) was first reported from Calhoun County on June 10. No general infestation developed. PINK BOLLWORM (Pectinophora gossypiella) began to buildup in May in the lower Rio Grande Valley and caused considerable damage. Populations were heavier in the south central area than in 1957. Unfavorable weather conditions delayed harvest and fall cleanup, which was similar to 1957. GRASSHOPPERS (several species) damaged cotton on field margins in the west cross timbers and northwest areas. Other insects that damaged cotton included STINK BUGS, GARDEN WEBWORM, LYGUS BUGS, FALSE CHINCH BUGS, CUTWORMS and COTTON SQUARE BORER.

Forest, Ornamental and Shade Tree Insects: SOUTHERN PINE BEETLE (Dendroctonus frontalis) appeared in epidemic proportions in Hardin County. NANTUCKET PINE MOTH (Rhyacionia frustrana) infestations developed on shortleaf pines on the western edge of the pine belt. RED-HEADED PINE SAWFLY (Neodiprion lecontei) caused partial defoliation of young pine plantings in east Texas. TEXAS LEAF-

CUTTING ANT (Atta texana) damaged pine seedlings throughout eastern area. BAGWORM (Thyridopteryx ephemeraeformis) damaged ornamental and shade trees throughout central Texas. GALL INSECTS were numerous on oak throughout south central area. Other insects occurring on shade trees and ornamental plants were MEALYBUGS, APHIDS, PSOCIDS, SPIDER MITES, WOOD BORERS, FALL WEBWORM and SCALE INSECTS.

Stored-grain Insects: Grain sorghum is now a major crop in Texas and the stored-grain pest problem has increased. The main insect pests are RICE WEEVIL (Sitophilus oryza), ANGOUMOIS GRAIN MOTH (Sitotroga cerealella), A RICE MOTH, INDIAN-MEAL MOTH (Plodia interpunctella), LESSER GRAIN BORER (Rhyzopertha dominica) and BRAN BEETLES (including FLAT GRAIN BEETLE (Laemophloeus pusillus), CONFUSED FLOUR BEETLE (Tribolium confusum) and SAW-TOOTHED GRAIN BEETLE (Oryzaephilus surinamensis)).

Insects Affecting Man and Animals: SCREW-WORM (Callitroga hominivorax) continued heavy throughout the State. CATTLE GRUBS (Hypoderma spp.) caused losses statewide. ASSASSIN BUGS (Triatoma spp.) caused concern in homes in the southern and western areas. BROWN DOG TICK (Rhipicephalus sanguineus) was heavy on dogs in the south central area. HOUSE FLY (Musca domestica) was numerous. MOSQUITOES were extremely numerous over most of the State, due partly to the above-normal rainfall. Other insects such as ROACHES, SILVERFISH, TERMITES, CLOTHES MOTHS and FLEAS continued as pests in and around homes.

Miscellaneous Insects: IMPORTED FIRE ANT (Solenopsis saevissima richteri) situation has changed in the State. A survey in early fall failed to verify its presence in seven counties previously reported and two new counties were added earlier in 1958. Counties now infested are Orange, Jasper, Newton, Hardin, Jefferson, Harris and Bexar. Swarming of TEXAS LEAF-CUTTING ANT (Atta texana) was numerous during 1958. RED HARVESTER ANT (Pogonomyrmex barbatus) continued abundant throughout the State.

SUMMARY OF INSECT CONDITIONS - 1958

LOUISIANA

Prepared by Wm. T. Spink

Highlights: Excessive rainfall delayed spring planting until late May, with some cotton fields being planted the first of June. May floods in the Red River and Ouachita River Valleys forced replanting of many fields, with some replanted three times before a stand was obtained. These weather conditions may have been responsible for some of the unusual insect conditions which prevailed in many areas of the State during 1958. HORSE FLIES and MOSQUITOES were unusually abundant statewide. GREENBUG damage to oats in the north necessitated plowing under some fields. GARDEN WEBWORM completely destroyed fields of cotton, corn and soybeans. RICE STINK BUG occurred in greater numbers than ever before. SOUTHWESTERN CORN BORER invaded several new parishes during 1958.

Cereal and Forage Insects: GREENBUG (Toxoptera graminum) occurred on wheat and oats in low numbers in the southwest in March. In northern parishes, heavy infestations completely destroyed some oat fields in April. An increased build-up of predators and parasites was noted, with syrphid larvae averaging 1 per sweep. ARMYWORM (Pseudaletia unipuncta) was not a serious threat to small grains, damaging numbers not appearing until wheat and oats were maturing in late May. RICE STALK BORER (Chilo plejadellus) did some damage to mature

wheat in St. Landry Parish in May. An early spring survey in Vermilion Parish bull grass for overwintering RICE STINK BUG (Oebalus pugnax) showed an average of 1.4 bugs per clump in May. Light infestations appeared by late June in Vermilion, Acadia and Jefferson Davis Parish rice fields with high percentages of wild grass. Their numbers increased in late July and movement began from wild grass to heading rice. By late August infestations in St. Landry Parish averaged 21.5 bugs per 10 sweeps. A statewide fall survey for hoja blanca and its vector (Sogatia orizicola) was negative. RICE WATER WEEVIL (Lissorhoptrus oryzophilus), SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) and A STINK BUG (Euschistus ictericus) caused some damage to rice in July. A BLISTER BEETLE (Epicauta sp.) averaged 100 per 100 sweeps in rice in Vermilion Parish and heavily infested alfalfa and soybeans in Tensas Parish in June and July. GRASSHOPPERS (mostly Conocephalus sp. and Orchelimum sp.) heavily infested rice in Vermilion Parish. GRASSHOPPERS were also present in large numbers in clovers, alfalfa and pasture grasses. Large populations of PEA APHID (Macrosiphum pisi) were present in alfalfa and clover. GARDEN WEBWORM (Loxostege similalis) was very troublesome on many crops. Light numbers appeared first on alfalfa in early June in Tensas Parish and heavy in Caddo Parish. At the same time, heavy but localized infestations occurred in corn. They continued as a serious problem on corn and soybeans throughout June but decreased on alfalfa.

Light infestations of THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) appeared in blooming alfalfa about mid-June and increased by mid-July. Heavy infestations were observed by late July, and 892 per 100 sweeps and 858 per 25 sweeps were taken in 2 experimental plots in northern Louisiana. Some damage to soybeans was noted in St. Landry Parish. Heavy infestations of TARNISHED PLANT BUG (Lygus lineolaris) occurred in northern areas on alfalfa in June and July. Clovers were infested in early May with a complex of LEPIDOPTEROUS larvae, mostly Heliothis zea, with VARIEGATED CUTWORM, LOOPERS and GREEN CLOVERWORM also present. Disease and parasitism were observed in all infested areas. Populations were reduced in late May but increased in July with heavy infestations on clover, Bahiagrass and other pasture grasses in St. Tammany Parish. Larvae of a HESPERIID (Atalopedes campestris) heavily infested a Bermuda grass pasture in Lafayette Parish. A WEBWORM (Herculia psammioxantha) heavily infested baled hay in a barn in Lafayette Parish in November. FALL ARMYWORM (Laphygma frugiperda) was first observed on corn at Diamond in mid-May and appeared in East Baton Rouge Parish by the end of the month. In early June, heavy populations were found in northern areas in corn and light infestations were found in grain sorghum. Young corn was 100 percent infested by August in some areas. Populations of CORN EARWORM (Heliothis zea) on corn were general statewide, with some infestations averaging 70 percent. Milo and grain sorghum were also infested. SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) infestations were extremely heavy in the northwest corner of the State but decreased in parishes further removed from this area. It is now present in Bossier, Caddo, Claiborne, De Soto, Lincoln, Morehouse, Natchitoches, Red River, Union and Webster Parishes. EUROPEAN CORN BORER (Pyrausta nubilalis) continued its rapid expansion and is now present in Bossier, Caddo, Concordia, East Carroll, West Carroll, Franklin, Madison, Morehouse, Natchitoches, Ouachita, Red River, Richland and Tensas Parishes. Infestations remain extremely light and of no economic importance on corn. SUGARCANE BORER (Diatraea saccharalis) was very serious on corn grown in conjunction with sugarcane. The borer was found for the first time in Grant Parish on corn. CORN LEAF APHID (Rhopalosiphum maidis) was present in fairly large numbers on corn but did not appear to be damaging. In July, SORGHUM WEBWORM (Celama sorghiella) was moderate on grain sorghum in Tensas and Franklin Parishes. Adults and small larvae of VELVETBEAN CATERPILLAR (Anticarsia gemmatilis) first appeared on soybeans during mid-August in southwest Louisiana. As populations rapidly built up, controls were begun and by early September these pests were brought under control. COWPEA CURCULIO (Chalcodermus aeneus) heavily infested cowpeas in Webster Parish in August.

Sugarcane Insects: SUGARCANE BORER (Diatraea saccharalis) was very severe in untreated sugarcane. Egg masses were first observed in April in St. Charles, West Baton Rouge and Terrebonne Parishes. First to third-instar larvae appeared in early May and pupae by mid-May. Second-generation egg masses appeared by mid-June and second and third generations were overlapping by the third week of July. In untreated fields infestations averaged 66 percent. Infestations of YELLOW SUGARCANE APHID (Sipha flava) ranged 0-15 percent in plants examined during April and May but apparently caused little damage.

Fruit Insects: LESSER PEACH TREE BORER (Synanthedon pictipes) occurred in damaging numbers in several orchards in the Ruston area in March. All immature stages were present, adults emerging by mid-April. SAN JOSE SCALE (Aspidiotus perniciosus) was also damaging in these same orchards. EASTERN TENT CATERPILLAR (Malacosoma americanum) hatched on plum and cherry in Lincoln and Claiborne Parishes the latter part of February. PLUM CURCULIO (Conotrachelus nenuphar) was extremely scarce on wild plum in northern areas of the State in April but by June was heavy in Livingston, East Baton Rouge, St. John and Sabine Parishes. FALL WEBWORM (Hyphantria cunea) was a serious problem on pecans in the State throughout the year. PECAN LEAF CASEBEARER (Acrobasis juglandis) and PECAN NUT CASEBEARER (Acrobasis caryae) heavily infested pecans in the New Orleans area in May and June. UGLY-NEST CATERPILLAR (Archips cerasivorana) webbing completely covered pecan trees, nearby ground and buildings at Melville, where it was localized. Various control measures were taken. Infestations of WALNUT CATERPILLAR (Datana integerrima) on pecans occurred in the greater New Orleans area. Light infestations of BLACK PECAN APHID (Melanocallis caryaefoliae) and a SPIDER MITE (Eotetranychus hicoriae) occurred on the first of August in Caddo and Natchitoches Parishes, respectively, but by the month's end had spread over the State generally and populations had increased tremendously.

Truck Crop Insects: CABBAGE LOOPER (Trichoplusia ni) if uncontrolled, is the most destructive pest of cole crops in State. Untreated experimental plots at Diamond were 100 percent infested. IMPORTED CABBAGEWORM (Pieris rapae), DIAMONDBACK MOTH (Plutella maculipennis) and CROSS-STRIPED CABBAGEWORM (Evergestis rimosalis) where not controlled, were serious on cole crops. TOMATO FRUITWORM (Heliothis zea) caused some damage to tomatoes and severely damaged a five-acre field of eggplant in southern part of the State. TOMATO HORNWORM (Protoparce quinquemaculata) was of no economic importance. Medium to heavy infestations of COLORADO POTATO BEETLE (Leptinotarsa decemlineata) were observed on potatoes and tomatoes in the southeastern area. SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) and STRIPED CUCUMBER BEETLE (Acalymma vittata) heavily infested squash, cucumber and watermelons in West Carroll, Grant and East Baton Rouge Parishes. GARDEN WEBWORM (Loxostege similalis), FALL ARMYWORM (Laphygma frugiperda) and YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) caused considerable damage in early July to sweetpotato foliage in St. Landry Parish. About mid-August SWEETPOTATO LEAF ROLLER (Pilocrocis tripunctata) caused widespread damage to sweetpotato foliage in Lafayette and St. Landry Parishes.

Cotton Insects: BOLL WEEVIL (Anthonomus grandis) was the most important pest of cotton in 1958. Recommended treatments were used and good control was maintained. BOLLWORMS (Heliothis spp. et al.) were normal throughout the State. SPIDER MITES (Tetranychus spp.) appeared to be more abundant than usual, particularly in St. Landry Parish where some defoliation took place in July. THRIPS and APHIDS were generally light in the State. Seedling cotton in some areas, particularly the Ouachita River Valley, was heavily infested with GARDEN WEBWORM (Loxostege similalis).

Forest, Ornamental and Shade Tree Insects: EASTERN TENT CATERPILLAR

(Malacosoma americanum) began hatching in February. Nests averaged 6-8 inches in diameter by April and were very abundant over all of the northern area. FOREST TENT CATERPILLAR (Malacosoma disstria) was extremely numerous in East Baton Rouge and Orleans Parishes. Light infestations of ELM LEAF BEETLE (Galerucella xanthomelaena) occurred in Orleans Parish. Pine seedlings and pine trees were infested in scattered and localized areas with NANTUCKET PINE MOTH (Rhyacionia frustrana), a SAWFLY larva (Neodiprion sp.), a PINE COLASPIS (Colaspis pini), RED-HEADED PINE SAWFLY (Neodiprion lecontei) and PINE WEBWORM (Tetralopha robustella). A PHYCITID (Euzophora ostricorella) seriously damaged some nursery magnolia stock near Covington. MAGNOLIA SCALE (Neolecanium cornuparvum) infested magnolia trees in St. Tammany Parish. SOLITARY OAK LEAF MINER (Cameraria hamadryadella) was serious on white oak in East Baton Rouge, West Baton Rouge and St. Landry Parishes. A CHINCH BUG (Blissus leucopterus insularis) was responsible for widespread damage to St. Augustine grass lawns in southern Louisiana. Some St. Augustine grass lawns in Vermilion Parish were infested with RHODES-GRASS SCALE (Antonina graminis).

Insects Affecting Man and Animals: MOSQUITOES and HORSE FLIES (Tabanus spp.) were unusually serious this year, heavy populations occurring in all areas of the State. HORN FLY (Siphona irritans) was abundant in all cattle-producing areas. HOUSE FLIES were extremely annoying in all areas. DEER FLIES were active in northern areas. Anthrax and anaplasmosis epidemics occurred in the northern parishes. Authenticated SCREW-WORM (Callitroga hominivorax) reports totalled 17 in the State. Three reports were on Texas cattle intercepted at the Slidell Inspection Station. The other 14 reports were infestations of cattle, sheep and a dog which occurred in Tensas, Caddo, Webster, Grant, Claiborne, Concordia, Bossier, Natchitoches and Madison Parishes. PUSS CATERPILLARS (probably Megalopyge opercularis) were very abundant and several reports were received of severe stings to persons. One unconfirmed report claimed hospitalization was necessary. EARWIGS were heavily infesting slab homes in Jefferson and Orleans Parishes.

Stored-grain Insects: RICE WEEVIL (Sitophilus oryza) was the most important insect pest of stored-grain in 1958. A survey during the summer revealed that 78 percent of corn ears examined were infested. A considerable quantity of this corn was infested when harvested. ANGOUMOIS GRAIN MOTH (Sitotroga cerealella), SQUARE-NECKED GRAIN BEETLE (Cathartus quadricollis), RED FLOUR BEETLE (Tribolium castaneum) and SAW-TOOTHED GRAIN BEETLE (Oryzaephilus surinamensis) followed in importance in that order.

Miscellaneous Insects: MILLIPEDES infested yards, driveways, porches and, in some instances, invaded homes in East Baton Rouge Parish. A LYCTUS BEETLE (Lyctus brunneus) was found at Winnsboro in furniture imported from Japan.

New Introductions: An APHID (Myzus hemerocallis) was taken on daylilies in Baton Rouge and Lafayette, Louisiana. This aphid was previously reported only from Formosa and China. Det. L. M. Russell.

STATE CLEARING OFFICES
for Economic Insect Survey Reports

Alabama	Dr. F. S. Arant, Head, Department of Zoology and Entomology, Alabama Polytechnic Institute, Auburn
Alaska	Dr. Richard H. Washburn, Entomology Dept., Agricultural Experiment Station, Palmer
Arizona	Dr. J. N. Roney, Extension Entomologist, University of Arizona, 1201 W. Madison St., P. O. Box 751, Phoenix
Arkansas	Mr. Gordon Barnes, Extension Entomologist, University of Arkansas, Fayetteville
California	Mr. R. W. Harper, Chief, Bureau of Entomology, State Department of Agriculture, Sacramento 14
Colorado	Dr. Leslie B. Daniels, Head, Department of Entomology, Colorado State University, Ft. Collins
Connecticut	Mr. J. Peter Johnson, Associate Entomologist, Agricultural Experiment Station, P. O. Box 1106, New Haven 4
Delaware	Dr. Dale F. Bray, Chairman, Department of Entomology, University of Delaware, Newark
Florida	Mr. W. G. Cowperthwaite, Plant Commissioner, State Plant Board of Florida, Gainesville
Georgia	Dr. C. R. Jordan, Jr., Extension Entomologist, University of Georgia, College of Agriculture, Athens
Hawaii	Division of Entomology & Marketing, Board of Agriculture and Forestry, Honolulu 1
Idaho	Dr. H. C. Manis, Head, Department of Entomology, University of Idaho, Moscow
Illinois	Mr. H. B. Petty, Jr., Extension Entomologist, Illinois Agricultural Extension Service, 280 Natural Resources Building, Urbana
Indiana	Dr. John V. Osmun, Head, Department of Entomology, Purdue University, Lafayette
Iowa	Dr. H. M. Harris, Head, Department of Zoology and Entomology, Iowa State College, Ames
Kansas	Dr. Herbert Knutson, Head, Department of Entomology, Kansas State College, Manhattan
Kentucky	Dr. Lee H. Townsend, Head, Department of Entomology, University of Kentucky, Lexington 29
Louisiana	Dr. L. D. Newsom, Head, Entomology Research, Louisiana State University, Baton Rouge 3

Maine	Dr. G. W. Simpson, Head, Department of Entomology, University of Maine, Orono
Maryland	Mr. T. L. Bissell, Department of Entomology, University of Maryland, College Park
Massachusetts	Dr. E. H. Wheeler, Extension Entomologist, University of Massachusetts, Amherst
Michigan	Mr. Ray Hutson, Head, Department of Entomology, Michigan State University, East Lansing 13
Minnesota	Mr. W. M. Anderson, Acting Director, Division of Plant Industry, Department of Agriculture, Dairy and Food, 312 Coffey Hall, University Farm, St. Paul 1
Mississippi	Dr. R. E. Hutchins, Head, Department of Zoology and Entomology, Mississippi State College, State College
Missouri	Mr. Stirling Kyd, Extension Entomologist, Department of Entomology, University of Missouri, Columbia
Montana	Dr. J. H. Pepper, Head, Department of Zoology and Entomology, Montana State College, Bozeman
Nebraska	Dr. Roscoe E. Hill, Chairman, Department of Entomology, University of Nebraska, Lincoln 3
Nevada	Mr. Lee M. Burge, Director, Division of Plant Industry, Department of Agriculture, P. O. Box 1027, Reno
New Hampshire	Dr. J. G. Conklin, Professor of Economic Entomology, University of New Hampshire, Durham
New Jersey	Dr. B. B. Pepper, Department of Entomology, Rutgers University, New Brunswick
New Mexico	Mr. Dallas Rierson, Director, State Department of Agriculture, New Mexico State University, State College
New York	Dr. A. A. Muka, Extension Entomologist, Department of Entomology and Limnology, Cornell University, Ithaca

North Carolina	Mr. George D. Jones, Extension Entomologist, North Carolina State College of Agriculture, Raleigh
North Dakota	Dr. J. R. Dogger, Chairman, Department of Entomology, North Dakota Agricultural College, State College Station, Fargo
Ohio	Dr. C. R. Neiswander, Associate Chairman, Department of Zoology and Entomology, Ohio Agricultural Experiment Station, Wooster
Oklahoma	Dr. D. E. Howell, Head, Department of Entomology, Oklahoma State University, Stillwater
Oregon	Mr. G. A. Konnersman, Survey Entomologist, Division of Plant Industry, State Department of Agriculture, Salem
Pennsylvania	Mr. J. O. Pepper, Extension Entomologist, Zoology and Entomology Department, Pennsylvania State University, University Park
Puerto Rico	Agricultural Experiment Station, Rio Piedras
Rhode Island	Dr. F. L. Howard, Head, Department of Plant Pathology and Entomology, University of Rhode Island, Kingston
South Carolina	Mr. W. C. Nettles, Leader, Extension Entomology and Plant Disease Work, Clemson Agricultural College, Clemson
South Dakota	Dr. G. B. Spawn, Head, Department of Entomology and Zoology, South Dakota State College of A & M Arts, College Station
Tennessee	Mr. R. P. Mullett, Extension Entomologist and Plant Pathologist, College of Agriculture, University of Tennessee, Knoxville 16
Texas	Dr. J. C. Gaines, Head, Department of Entomology, Texas A & M College, College Station
Utah	Dr. George F. Knowlton, Extension Entomologist, Utah State University, Logan
Vermont	Mr. John W. Scott, Director, Division of Plant Pest Control, State Department of Agriculture, Montpelier

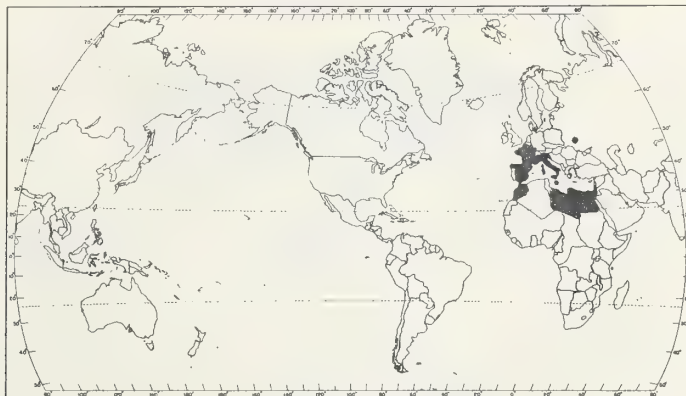
Virginia	Dr. J. O. Rowell, Extension Entomologist, Virginia Polytechnic Institute, Blacksburg
Washington	Dr. Horace S. Telford, Chairman, Department of Entomology, Washington State College, Pullman
West Virginia	Mr. F. Waldo Craig, Chief, Plant Pest Control Division, Department of Agriculture, Charleston 5
Wisconsin	Mr. E. L. Chambers, Chief, Plant Industry Division, Department of Agriculture, 448 W. Washington Ave., Madison 3
Wyoming	Mr. T. R. Robb, Extension Entomologist, University of Wyoming, Laramie

Released January 23, 1959
CEIR, Volume 9, No. 4

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

A BEET CURCULIONID (Lixus junci Boheman)

Economic Importance: Lixus junci is a curculionid pest of major importance on sugar beets in the Mediterranean Basin. Several other species of Lixus have been recorded as pests of beets, but L. junci appears to be the most important. Damage is caused by both adults and larvae. The adults feed on the leaves and stems, sometimes destroying young plantings, and the larvae make galleries in the roots which cause diminution and decay. Losses to the sugar beet crop have been estimated as high as 40 percent in Morocco and 50 percent in Israel. Unless control measures are applied in Israel, growers in that country can expect a 50-60 percent loss of the crop annually. Severe injury was caused to beets grown for seed in northwestern France in 1946, lambsquarters being the source of infestation.



General Distribution of Lixus junci

Distribution: Generally distributed in the Mediterranean region, being recorded in France, Spain, Italy, Israel, USSR (Kiev), Egypt, Libya, Morocco and the Islands of Sicily, Malta, Sardinia and Corsica.

Hosts: Attacks many plants; beets are the most important cultivated host.

Life History and Habits: Overwintering adults appear in early spring in Italy and feed on garden plants before migrating to roots of beets where they continue to feed before egg laying begins. The female makes a hole in the neck of the plant with her snout, inserts the egg and covers the hole with feeding debris. Very small plants are sometimes nearly cutoff, causing death of the plant. Frequently, however, eggs are laid in the petioles and midribs. Larvae hatch in 4-5 days, begin feeding on the petioles or the leaves and then penetrate the root, making long vertical galleries. Infestations are more severe in hot weather when the leaves remain small and most of the development of the insect takes place in the root. Two or three larvae may cause the whole upper part of a root to rot. After 30-60 days, pupation takes place in the galleries and new-generation adults emerge in 2-3 weeks. There are normally two generations a year, but a partial third generation is reported in Morocco. In Israel, the second generation which is heaviest and most dangerous starts from June to August.

Description: Adults are 8-13 mm. long, narrow and elongate, cylindrical, covered with easily removed, yellowish bloom, with white band on the sides of the thorax and elytra. Head and thorax rugose, snout about as long as thorax; elytra with rounded apex, 8 longitudinal rows of small striations; wings present. Egg is ovoidal, unsculptured, yellowish, and about 1.05 mm. long and 0.72 mm. wide. Mature larva about 10 mm. long and 3 mm. wide. Pupa is about 10 mm. long; tips of wing-pads reach posterior end of fourth abdominal sternite. Front legs extend almost to proximal margin of first tarsal segment of middle pair; middle pair extend to posterior third of fourth abdominal sternite. Head completely hidden from above by pronotum. Rostrum elongated and slender. Abdomen with eight distinct tergites; seventh largest and eighth smallest; total sternites 9. Seventh abdominal sternite with 2 large setae; eighth with 2 fleshy processes, each carrying 2 spines directed upwards. (Prepared in Survey & Detection Operations in cooperation with other ARS agencies.) CEIR 9 (4) 1-23-59.



Adult, Pupa and Larva of Lixus junci

Figures (except map) from Bremond, P. 1938. Rev. de Path. Veget. et d'Entomol. Agr. de France 25(1):59-73.

UNITED STATES DEPARTMENT OF AGRICULTURE
PLANT PEST

TO COOPERATORS:

This map is based upon the results of cooperative survey in the summer and fall of 1958. The survey reveals where and how severe the potential severity of infestations for 1959. Nymphs of grasshopper populations which will warrant control.

The infestation on croplands, shown on the map in 1958. Control on those lands was indicated for 1958. Control on those lands was from Division and State personnel. The infested 22,666,922 acres in 15 Western and Midwestern States. Infestations may be solid or spotted.

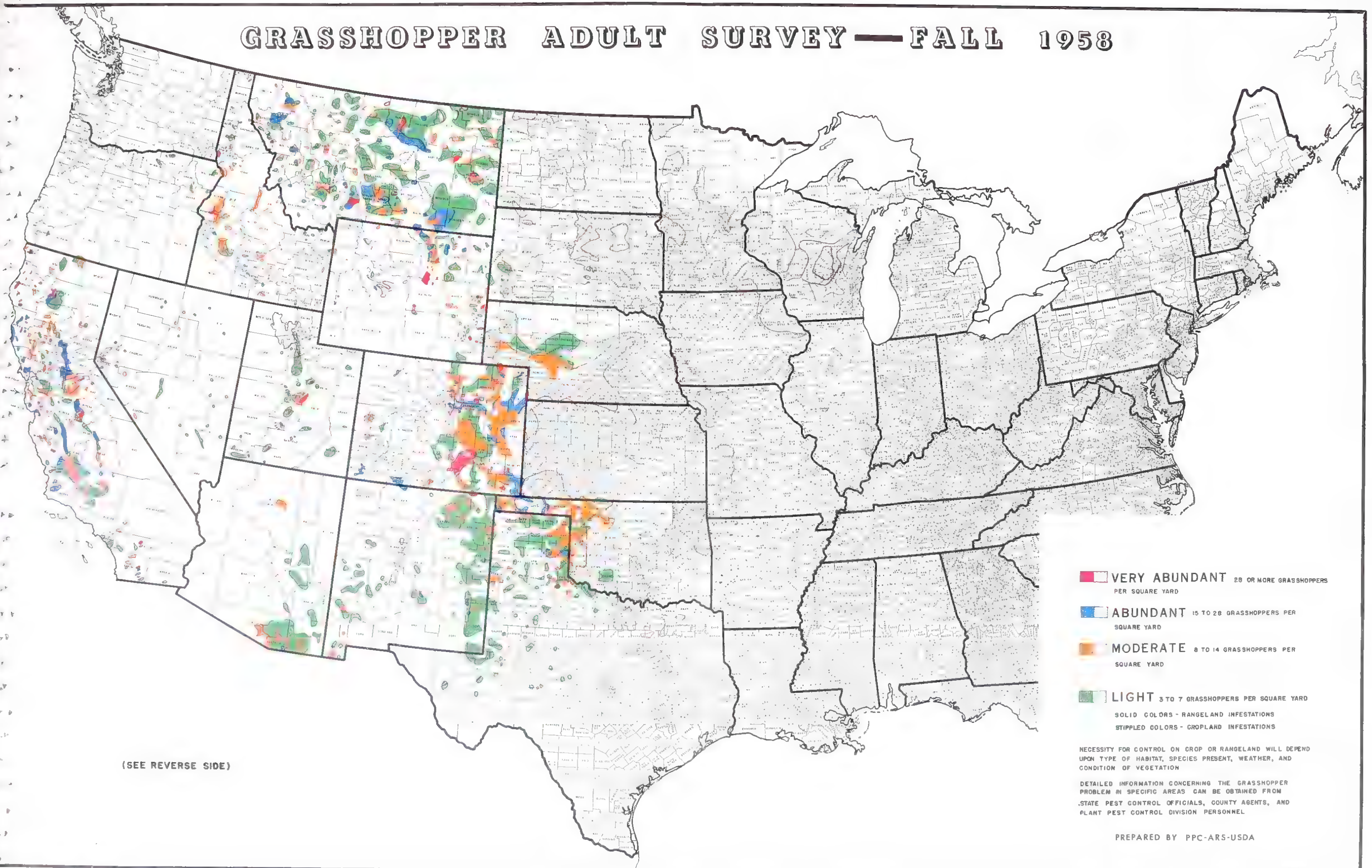
RANGELAND GRASSHOPPER INFESTATIONS

REGION AND STATE	LANDOWNERSHIP - ACRES		Total Acres
	Private & State	Public Domain	
<u>CENTRAL:</u>			
Kansas	365,000	--	365,000
Nebraska	570,000	--	570,000
So. Dakota	--	6,000	6,000
<u>WESTERN:</u>			
Arizona	252,080	70,000	322,080
California	4,523,300	--	4,523,300
Colorado	5,619,000	68,000	5,687,000
Idaho	284,740	279,760	564,500

The survey was planned and performed by the Plant Pest Control Division, various State and Federal personnel.

November

GRASSHOPPER ADULT SURVEY — FALL 1958



(SEE REVERSE SIDE)

- VERY ABUNDANT** 25 OR MORE GRASSHOPPERS PER SQUARE YARD
 - ABUNDANT** 15 TO 24 GRASSHOPPERS PER SQUARE YARD
 - MODERATE** 8 TO 14 GRASSHOPPERS PER SQUARE YARD
 - LIGHT** 3 TO 7 GRASSHOPPERS PER SQUARE YARD
- SOLID COLORS - RANGELAND INFESTATIONS
STIPPLED COLORS - CROPLAND INFESTATIONS

NECESSITY FOR CONTROL ON CROP OR RANGELAND WILL DEPEND UPON TYPE OF HABITAT, SPECIES PRESENT, WEATHER, AND CONDITION OF VEGETATION

DETAILED INFORMATION CONCERNING THE GRASSHOPPER PROBLEM IN SPECIFIC AREAS CAN BE OBTAINED FROM STATE PEST CONTROL OFFICIALS, COUNTY AGENTS, AND PLANT PEST CONTROL DIVISION PERSONNEL

PREPARED BY PPC-ARS-USDA

DEPARTMENT OF AGRICULTURE
 AGRICULTURAL RESEARCH SERVICE
 CONTROL DIVISION

grasshopper adult surveys made during the late summer show how many grasshoppers infest an area, and indicate the final surveys, made each spring, provide the final index control that growing season.

stippling, in general are slightly higher than that which will be handled by the farmers with technical assistance. Large areas, shown on the map in solid colors, total acres. Shaded areas are diagrammatic. Within these areas

STATISTICS --- ACREAGE BY REGIONS, FALL 1958

	REGION AND STATE	LANDOWNERSHIP - ACRES		Total Acres
		Private & State	Public Domain	
	Montana	1,285,000	1,140,000	2,425,000
	Nevada	12,700	171,840	184,540
	New Mexico	768,820	62,000	830,820
	Oregon	10,000	--	10,000
	Utah	9,000	61,500	70,500
	Wyoming	799,000	156,000	955,000
	<u>SOUTHERN:</u>			
	Oklahoma	2,693,182	--	2,693,182
	Texas	3,460,000	--	3,460,000

Control Division, Agricultural Research Service in cooperation with agencies concerned.

October 20, 1958

UNITED STATES DEPARTMENT OF AGRICULTURE
 AGRICULTURAL RESEARCH SERVICE
 PLANT PEST CONTROL DIVISION

TO COOPERATORS:

This map is based upon the results of cooperative grasshopper adult surveys made during the late summer and fall of 1958. The survey reveals where and how many grasshoppers infest an area, and indicate the potential severity of infestations for 1959. Nymphal surveys, made each spring, provide the final index of grasshopper populations which will warrant control that growing season.

The infestation on croplands, shown on the map in stippling, in general are slightly higher than that which was indicated for 1958. Control on those lands will be handled by the farmers with technical assistance from Division and State personnel. The infested range areas, shown on the map in solid colors, total 22,666,922 acres in 15 Western and Midwestern States. Shaded areas are diagrammatic. Within these areas infestations may be solid or spotted.

RANGELAND GRASSHOPPER INFESTATIONS --- ACREAGE BY REGIONS, FALL 1958

REGION AND STATE	LANDOWNERSHIP - ACRES		Total Acres	REGION AND STATE	LANDOWNERSHIP - ACRES		Total Acres
	Private & State	Public Domain			Private & State	Public Domain	
<u>CENTRAL:</u>				Montana	1,285,000	1,140,000	2,425,000
Kansas	365,000	---	365,000	Nevada	12,700	171,840	184,540
Nebraska	570,000	---	570,000	New Mexico	768,820	62,000	830,820
So. Dakota	---	6,000	6,000	Oregon	10,000	---	10,000
				Utah	9,000	61,500	70,500
<u>WESTERN:</u>				Wyoming	799,000	156,000	955,000
Arizona	252,080	70,000	322,080				
California	4,523,300	---	4,523,300	<u>SOUTHERN:</u>			
Colorado	5,619,000	68,000	5,687,000	Oklahoma	2,693,182	---	2,693,182
Idaho	284,740	279,760	564,500	Texas	3,460,000	---	3,460,000

The survey was planned and performed by the Plant Pest Control Division, Agricultural Research Service in cooperation with various State agencies concerned.

November 20, 1958

UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON 25, D. C.
Official Business

Penalty for Private Use to Avoid
Payment of Postage, \$300

